WHAT IS CLAIMED IS:

1. A process for preparing a bromine-containing, hydroxy-functional copolymer, said process comprising:

(a) providing an initiator having at least one bromine atom, the initiator being a solid at room temperature; and

(b) reacting the initiator with an effective amount of lactone monomers to establish a bromine-containing, hydroxy-functional copolymer that is a liquid at room temperature.

2. A process according to claim 1, wherein the lactone monomers comprise at least one member selected from the group consisting of β-propiolactone, β-butyrolactone, α,α-bis(chloromethyl) propiolactone, δ-valerolactone, α,β,γ-trimethoxy-δ-valerolactone, 1,4-dioxane-2-one, glycolide, lactide, 1,4-dithiane-2,5-dione, trimethylene carbonate, neopentylene carbonate, ethylene oxalate, propylene oxalate, ε-caprolactone, β-methyl-ε-isopropyl-ε-caprolactone, γ-methyl-ε-caprolactone, ε-methyl-ε-caprolactone, and β,δ—dimethyl-ε-caprolactone.

3. A process according to claim 1, wherein the initiator comprises a monohydric alcohol, wherein the bromine-containing, hydroxy-functional copolymer comprises an AB diblock copolymer consisting of an A block and a B block, wherein the process comprises forming the B block from the monohydric alcohol and forming the A block from one or more of the lactone monomers, and wherein the A block comprises either an ester or a polyester.

4. A process according to claim 3, wherein the initiator comprises at least one monohydric alcohol selected from the group consisting of 2,4-dibromophenol, 2,4,6-tribromophenol, dibromopropanol, and tribromoneopentyl alcohol.

5. A process according to claim 3, wherein said reacting (b) comprises propagating a ring-opening polymerization reaction to provide the bromine-containing, hydroxy-functional copolymer with a polyester block, wherein the polyester block has at least two ester repeating units and a hydroxy functionality.

6. A process according to claim 1, wherein the initiator comprises a glycol, and wherein the bromine-containing copolymer comprises an ABA triblock copolymer consisting of two hydroxy-functional A blocks and a B block, wherein the process comprises forming the B block from the glycol and forming each of the A blocks from at least a respective one of the lactone monomers, each of the A blocks independently comprising an ester or a polyester.

7. A process according to claim 6, wherein the initiator comprises at least one member selected from the group consisting of tetrabromobisphenol A, tetrabromobisphenol A-bis(2-hydroxy-ethyl ether), dibromoneopentyl glycol, and tetrabromodipentaerythritol.

8. A process according to claim 6, wherein said reacting (b) comprises propagating a ring-opening polymerization reaction to provide the bromine-containing, hydroxy-functional copolymer with at least one polyester block, wherein the polyester block has at least two ester repeating units and a hydroxy functionality.

9. A process according to claim 1, further comprising adding a catalyst that forms a complex with the initiator prior to said reacting (b) so that the initiator is present as the complex during said reacting (b).

10. A process according to claim 1, further comprising adding a catalyst comprising at least one member selected from the group consisting of boron trifluoride, sodium methoxide, calcium methoxide, aluminum

isopropoxide, tetrabutyl titanate, titanium chelates, titanium acylates, lead oxides, zinc borates, antimony oxide, sulfuric acid, hydrochloric acid, phosphoric acid, p-toluenesulfonic acid, tin(II) oxide, tin (II) octoate, and tin(II) acetate.

11. A process according to claim 1, wherein the bromine-containing, hydroxy-functional copolymer has an average molecular weight in a range of 300 to 2000.

12. A process according to claim 1, wherein the bromine-containing, hydroxy-functional copolymer has a Gardner color of less than 1.0.

13. A process according to claim 1, wherein the bromine-containing, hydroxy-functional copolymer has a viscosity in a range of 50 cps to 4500 cps at 25^{0}C.

14. A process according to claim 1, wherein the bromine-containing, hydroxyl-functional copolymer has a bromine weight content of 10% to 39%.

15. A process comprising:

(a) providing an initiator having at least one bromine atom, the initiator being a solid at room temperature;

(b) reacting at least one member selected from the group consisting of the initiator and a complex of the initiator and an optional catalyst with an effective amount of lactone monomers to establish a bromine-containing, hydroxy-functional copolymer that is a liquid at room temperature; and

(c) reacting the bromine-containing, hydroxy-functional copolymer with a polymer.

16. A process according to claim 16, wherein the lactone monomers comprise at least one member selected from the group consisting of α,α-

bis(chloromethyl) propiolactone, δ-valerolactone, α,β,γ-trimethoxy-δ-valerolactone, 1,4-dioxane-2-one, glycolide, lactide, 1.4-dithiane-2,5-dione, trimethylene carbonate, neopentylene carbonate, ethylene oxalate, propylene oxalate, γ-valerolactone, ε-caprolactone. β-methyl-ε-isopropyl-ε-caprolactone, γ-methyl-ε-caprolactone, ε-methyl-ε-caprolactone, and β,δ—dimethyl-ε-caprolactone.

17. A process according to claim 15, wherein the initiator comprises a monohydric alcohol, and wherein the bromine-containing, hydroxy-functional copolymer comprises an AB diblock copolymer consisting of an A block and a B block, wherein the process comprises forming the B block from the monohydric alcohol and forming the A block from one or more of the lactone monomers, wherein the A block is an ester or a polyester.

18. A process according to claim 17, wherein the initiator comprises at least one monohydric alcohol selected from the group consisting of 2,4-dibromophenol, 2,4,6-tribromophenol, dibromopropanol, and tribromoneopentyl alcohol.

19. A process according to claim 17, wherein said reacting (b) comprises propagating a ring-opening polymerization reaction to provide the bromine-containing, hydroxy-functional copolymer with a polyester block, wherein the polyester block has at least two ester repeating units and a hydroxy functionality.

20. A process according to claim 15, wherein the initiator comprises a glycol, and wherein the bromine-containing copolymer comprises an ABA triblock copolymer consisting of two hydroxy-functional A blocks and a B block, wherein the process comprises forming the B block from the glycol and forming each of the A blocks from at least a respective one of the lactone.

monomers, and wherein the A blocks are each independently selected from the group consisting of an ester and a polyester.

21. A process according to claim 20, wherein the initiator comprises at least one member selected from the group consisting of tetrabromobisphenol A, tetrabromobisphenol A-bis(2-hydroxy-ethyl ether), dibromoneopentyl glycol, and tetrabromodipentaerythritol.

22. A process according to claim 20, wherein said reacting (b) comprises propagating a ring-opening polymerization reaction to provide the bromine-containing, hydroxy-functional copolymer with at least one polyester block, wherein the polyester block has at least two ester repeating units and a hydroxy functionality.

23. A process according to claim 15, wherein said process comprises adding the optional catalyst to form a complex with the initiator prior to said reacting (b) so that the initiator is present as the complex during said reacting (b).

24. A process according to claim 15, wherein the optional catalyst comprises at least one member selected from the group consisting of boron trifluoride, sodium methoxide, calcium methoxide, aluminum isopropoxide, tetrabutyl titanate, titanium chelates titanium acylates, lead oxides, zinc borates, antimony oxide, sulfuric acid, hydrochloric acid, phosphoric acid, p-toluenesulfonic acid, tin(II) oxide, tin (II) octoate, and tin(II) acetate.

25. A process according to claim 15, wherein the bromine-containing, hydroxy-functional copolymer has an average molecular weight in a range of 300 to 2000.

26. A process according to claim 15, wherein the bromine-containing, hydroxy-functional copolymer has a Gardner color of less than 1.0.

27. A process according to claim 15, wherein the bromine-containing, hydroxy-functional copolymer has a viscosity in a range of 50 cps to 4500 cps at 25°C.

28. A process according to claim 15, wherein the bromine-containing, hydroxyl-functional copolymer has a bromine weight content of 10% to 39%.

29. A process according to claim 15, wherein the initiator comprises a monohydric alcohol, and wherein said reacting (c) comprises grafting the bromine-containing, hydroxy-functional copolymer to the polymer.

30. A process according to claim 15, wherein the initiator comprises a polyol, and wherein said reacting (c) comprises crosslinking the polymer with the bromine-containing, hydroxy-functional copolymer.